

## REMARKS

Applicant has carefully studied the outstanding Official Action mailed on October 4, 2007. This response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

Claims 1-5 and 7-12 stand rejected under 35 USC §102(b) as being anticipated by Webjörn et al.

Claims 1, 2, 5-9, 12 and 13 stand rejected under 35 USC §102(e) as being anticipated by Batchko et al. (US 2002/0179912).

In the rejection of claim 5, Examiner states that in both Webjörn et al. and Batchko et al. the frequency converter comprises a non-linear crystal placed within a cavity, and the common cavity is pumped by said polarized beams. This is respectfully traversed. Both Webjörn et al. and Batchko et al. each use a PPLN waveguide. Webjörn et al. specifically says the PPLN waveguide is made “using standard E-field poling and annealed proton exchange techniques”. Batchko et al. uses a PPLN waveguide as stated in paragraph 32, and states in several places that the waveguide and optics are “integrated into a monolithic optical structure”. Thus, neither of the cited references contemplates using a frequency converter that comprises a non-linear crystal placed within a common cavity, and that the common cavity is pumped by the polarized beams.

Accordingly, it is respectfully submitted that none of the prior art, taken singly or in combination, provides the claimed features of claim 5. Claims 1 and 7 have been amended to recite these features and are deemed allowable over the art. Claims 1 and 7 have also been amended to make it clear what beam is being split into two orthogonally polarized beams and that it is not necessary to rotate both beams but rather the “polarization of one of the beams may be rotated” as stated clearly in the second paragraph of the detailed description of the embodiments on page 3. Claim 12 has been amended to make sure there are no antecedence questions.

The rejection of claim 2 is respectfully traversed. Applicant does not find any mention of “jointly pumping one, type II phase matched frequency conversion process with two orthogonally polarized beams” anywhere in the cited references. It is respectfully pointed out that Examiner also has not mentioned this in the rejection and has not shown where this purportedly exists in the prior art. Thus the rejection of claim 2 and claims dependent thereon is respectfully deemed improper and overcome.

Accordingly, claims 1-4 and 6-13 are respectfully deemed allowable. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,  
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